VAS®
SPECTROMETERS


# Smart Analysis with Reliable Performance
# Accurate Results | Low Maintenance

www.vasspectrometers.com

# SILVER PLUS e

## Reliable Innovation


**1. Product Introduction**

The Silver Plus e is a compact and cost-efficient Optical Emission Spectrometer (OES) designed for reliable metal analysis in industrial environments. Built for production units and quality control laboratories, it delivers accurate elemental analysis while keeping operational and maintenance costs low. Its robust design, stable spark excitation system, and intuitive analytical software ensure consistent performance with minimal downtime.

**Key Capabilities**

- Accurate and dependable elemental analysis for routine metal testing
- Low operational and maintenance costs for long-term efficiency
- Stable spark excitation system for consistent analytical results
- Analysis of elements across multiple metal matrices, including steel, aluminium, copper, nickel, titanium, and cast iron
- Detection capability down to ~80 ppm for reliable composition verification

## 2. Highlights

- 35+ element analysis capability across multiple metal bases
- Detection limits down to 80 ppm for routine metal analysis
- Quick startup technology for faster readiness
- Monoblock optical system for stability
- Compact benchtop design suitable for industrial labs
- Optimized operational cost with efficient consumable usage
- Integrated surge protection and reliable hardware design

## 3. Technology & Engineering Excellence

### 3.1 The Heart of SILVER PLUS e – Linear Spark Excitation Source

The optics of Silver Plus e is built around flat field skewed sinusoidally modulated holographic grating based optical system.

- Linear spark excitation source with real-time regulation
- Stable spark discharge for repeatable analysis
- Multi-frequency spark source up to 1 kHz
- Improved analytical accuracy and repeatability
- Maintenance-free excitation system

### 3.2 Monoblock Optical System

- Monoblock optical chamber design
- Stable optical alignment for accurate measurements
- Reduced wavelength drift over time
- Low maintenance optical architecture

### 3.3 Optimized Argon Spark Stand

- Argon-flushed spark stand for stable plasma conditions
- Optimized gas flow design
- Reduced argon consumption (<3 L/min typical)
- Consistent analytical performance

### 3.4 Industrial-Grade Instrument Design

- Compact and durable benchtop instrument
- Integrated electrical surge protection
- Robust construction for industrial use
- Designed for continuous operation

## 4. Software & Analysis

### 4.1 Analysis Suite – Super-Intuitive Software

- User-friendly control panel style interface
- Quick analysis workflow
- Easy result monitoring and reporting
- Minimal operator training required

### 4.2 Software and Analysis Features

- Factory-calibrated analytical programs
- Automatic inter-element interference correction
- Display of Mean, Standard Deviation (SD), and RSD
- Flexible program standardization
- Data logging and historical result storage
- Export results to Excel

### 4.3 Data Handling & Reporting

- Real-time analysis monitoring
- Automatic result storage
- Customizable reporting formats
- Easy integration with laboratory workflows

## 5. Technical Specification

### 5.1 Excitation Source

- Linear spark excitation system
- Real-time regulation
- Multi-frequency spark source up to 1 kHz

### 5.2 Optical System

- Monoblock optical spectrometer design
- Temperature stabilized optical chamber
- CCD detector system
- Wavelength range: 163 – 417 nm

### 5.3 Spark Source / Gas Management

- Argon flushed spark stand
- Optimized gas flow design
- Typical argon consumption < 3 L/min

### 5.4 Sample Clamp & Maintenance

- Mechanical quick-engage sample clamp
- Compatible with multiple sample sizes
- Easy maintenance access

### 5.5 Control & Data Processing

- Windows-based analysis software
- Ethernet / USB connectivity
- High-speed data acquisition system

### 5.6 Weight & Dimensions

- Instrument weight: 80 kg
- Instrument Dimensions: Approx. 900 × 760 × 610 mm (L × W × H)

### 5.7 Environmental Requirements

- Operating temperature: 18 – 30°C
- Suitable for standard industrial laboratory environments

### 5.8 Electrical Requirements

- Power supply: 230 V AC
- Frequency: 50 Hz


## Corporate Office

#107, Building No. 17, Samhita International Complex, MTNL Lane, Sakinaka, Andheri (E), Mumbai 400072, India

## Exports Office

#A95, 3rd Floor, A Block,
DDA Shed, Okhla Phase - II,
New Delhi – 110020, India

**+91 89768 25840**
**+91 89768 25838**
**exports@vasbharat.in**



***Leading Innovation in Spectroscopy***